

METHODS OF FORMING VERTICAL POWER DEVICES HAVING DEEP AND SHALLOW TRENCHES THEREIN

Abstract of the Disclosure

5 Methods of forming vertical power devices include the steps of forming first and second deep trenches in a semiconductor substrate having a drift region of first conductivity type therein that extends into a mesa defined between first and second opposing sidewalls of the first and second deep trenches, respectively. Steps are also performed to form a UMOSFET in the mesa and form first and second base shielding regions of second conductivity type that extend into the mesa and are self-aligned with the first and second opposing sidewalls.

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